

### ABSTRACT OF THE DISCLOSURE

An Internet phone system and an Internet phone service method can connect a conventional wire telephone to a mobile communication network not via PSTN but via the Internet. The system includes a telephone; a connection converting apparatus for  
5 connecting the telephone to either the Internet or a PSTN; a user's computer in which software is installed for connecting the telephone to the Internet through the connection converting apparatus; a VoIP gateway for connecting a mobile communication network to the Internet; and a mobile telephone for accessing the Internet. The connection  
10 converting apparatus includes: a hook detector for detecting a hooked state of the telephone; a relay for connecting the telephone to either the Internet or the PSTN according to a command; a duplex circuit for suppressing voice leakage and side tone by converting and reconvert-  
ing from a two-line signal of the telephone to a four-line signal for transmission and reception; a tone decoder for decoding a DTMF tone of the telephone; and a microprocessor for exchanging control data for the user's computer,  
15 controlling the relay to cause the telephone to be connected to the Internet when the hook detector detects an off-the-hook state of the telephone, and providing number data to the user's computer when the microprocessor receives number data from the tone decoder.